

Amendments to the Claims:

1. (Currently Amended) An apparatus for receiving data comprising:
an edge processor operative to make decisions using a plurality of edges of a received data stream; and
a communication circuit ~~coupled to the edge processor, said communication circuit operative to convert communications with the edge processor from a first format to a second format; and~~
a plurality of current sources, said current sources coupled to form differential pairs to convert a differential voltage to a differential circuit, each of the differential pairs being coupled to a resistor.

2. (Currently Amended) The apparatus according to claim 1, wherein said first format ~~include~~ includes uni-directional signaling.

3. (Original) The apparatus according to claim 1, wherein the second format includes simultaneous bi-directional signaling.

4. (Original) The apparatus according to claim 3, wherein the first format includes uni-directional signaling.

5. (Currently Amended) The apparatus according to claim 1, wherein the second format ~~include~~ includes differential simultaneous bi-directional signaling.

6. (Cancelled)

7. (Currently Amended) The apparatus according to claim [[6]] 1, wherein said differential voltage is less than a safe operating voltage of the receiver.

8. (Original) An apparatus for converting signaling between a transmitter and an edge-based receiver from unidirectional signaling to differential simultaneous bi-directional signaling comprising:

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a plurality of current sources, said current sources coupled to the edge-based receiver to form differential pairs, said differential pairs operative to convert a plurality of differential voltages to a plurality of differential currents; and

a plurality of resistors coupled to each of the differential pairs to sum said differential currents to yield a single differential load.

9. (Original) The apparatus according to claim 8, wherein said plurality of differential voltages comprise a plurality of differential voltages from a transmitter and a plurality of differential voltages from a receiver, respectively.

10. (Original) The apparatus according to claim [[6]] 1, wherein said differential voltages are less than the safe operating voltage of said receiver.

11. (Currently Amended) A system ~~for performing signaling between a transmitter and an edge-based receiver~~ comprising:

a transmitter including a current mode driver, a high impedance output and a dual end termination;

an edge based receiver including an edge processor operative to make decisions using a plurality of edges of a received data stream; and

a conversion circuit ~~disposed between the edge based receiver and the transmitter, said conversion circuit operative~~ to convert signaling between the transmitter and the receiver from a first format to a second format;

a plurality of current sources to convert a plurality of differential voltages to a plurality of differential currents; and

a plurality of resistors to sum said plurality of differential currents in order to yield a single differential load.

12. (Original) The system according to claim 11, wherein said first format includes unidirectional signaling.

13. (Original) The system according to claim 11, wherein said second format includes simultaneous bi-directional signaling.

14. (Original) The system according to claim 11, wherein said second format includes differential simultaneous bi-directional signaling.

15. (Original) The system according to claim 14, wherein said first format includes unidirectional signaling.

16. (Original) The system according to claim 15, wherein said conversion circuit operates as a voltage/current subtraction circuit.

17. (Cancelled)

18. (Original) The system according to claim 15, wherein said conversion circuit further comprises:

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a plurality of current sources coupled to the edge-based receiver to form a plurality of differential pairs, said plurality of differential pairs operative to convert a plurality of differential voltages to a plurality of differential currents; and

a plurality of resistors coupled to each of the plurality of differential pairs to sum said plurality of differential currents to yield a single differential load.

19. (Original) A method for converting a signaling format between a transmitter and an edge-based receiver comprising:

creating a plurality of differential pairs;

converting a plurality of differential voltages in said plurality of differential pairs to a plurality of differential currents:

coupling the plurality of differential currents to an edge-based receiver; and

summing the plurality of differential currents to yield a single differential load.

20. (Original) The method according to claim 19, wherein the plurality of differential voltages comprise a plurality of differential voltages from a transmitter and a plurality of differential voltages from an edge-based receiver, respectively.

21. (Original) The method according to claim 20, wherein the edge-based receiver comprises an edge processor operative to make decisions using a plurality of edges of a received data stream.

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22. (Original) A computer readable media having encoded thereon instructions causing a processor to convert a signaling format between a transmitter and an edge-based receiver by:

- creating a plurality of differential pairs;
- converting a plurality of differential voltages in said plurality of differential pairs to a plurality of differential currents;
- coupling the plurality of differential currents to an edge-based receiver; and
- summing the plurality of differential currents to yield a single differential load.

23. (Original) The computer readable media according to claim 22, wherein the plurality of differential voltages comprise a plurality of differential voltages from a transmitter and a plurality of differential voltages from an edge-based receiver, respectively.

24. The computer readable media according to claim 23, wherein the edge-based receiver comprises an edge processor operative to make decisions using a plurality of edges of a received data stream.